

REMARKS

There were 44 claims in the original application numbered 1 – 44. Claims 43 – 47 were previously cancelled. Following this response to the Office Action there are 46 claims numbered 1 – 42 and 48 – 51. There are 6 independent claims and 40 dependent claims. Claims 1, 22 and 48 – 51 are the independent claims. Claims 2 – 11, 13 – 21 and 23 – 42 are the dependent claims. The status of the claims is as follows: claims 2 – 11, 14 – 21, 23 – 32, and 35 – 42 (Original); claims 48-51 (Previously Presented); claims 12, 33, and 52 – 53 (cancelled); and claims 1, 13, 22 and 34 (currently amended).

Reconsideration and allowance of the claims argued herein is respectfully requested.

The § 103 Rejections

At page 2 of the Office Action, the Examiner rejects claims 1 – 4, 8, 12, 16, 21 – 25, 29, 33, 37, 42 and 52 – 53 under 35 U.S.C. 103(a) as being unpatentable over French, US patent no. 6,341,312.

Claims 1 - 4

At page 2, paragraph 5 the Examiner rejects claim 1. Applicants have amended claim 1 to read in part, “attempting to continue the CIFS session between at

least one said client device and said file server that the request was part of, wherein said step of recording state further comprises the step of determining whether recovery will be accomplished by rebooting the affected server or takeover by another server.”

French states that “At a step 92 the routine tests to determine whether the network connection has been interrupted. For example, such an interruption may occur at just a lower level of the network connection protocol (as a result of a transient, intermittent condition). An interruption may occur across the entire connection, due to a power failure, server failure, or the like.” Conversely, Applicant’s invention claims in part “wherein said step of recording state further comprises the step of determining whether recovery will be accomplished by rebooting the affected server or takeover by another server.”

French does not teach a determination of how recovery will be made or what type of interruption has occurred. Fig. 5 of French and its associated text states that it tests only for an interruption (positive result) or no interruption (negative result). Figure 5 of French clearly shows this at flowchart decision diamond 92 “connection interrupted?” Applicant believes this is a limitation of French compared with the invention at issue and a product of its function. French replays connections in order to implement its persistent connection strategy while Applicant’s invention takes steps to recover from a server failure prior to a timeout declaration, so that the client connection is never severed. This may require reboot of a temporarily failed server or failover to a new one.

As previously stated, French neither teaches nor discloses determining whether recovery will be accomplished by rebooting the affected server or takeover by another server. In fact, Applicant can find no mention that French teaches takeover at all. For these reasons, French does not teach the invention.

Also, claim 1 states in part “recording a state at said file server at the time of said receiving about the request, said state including information regarding a persistent connection between said server and a client device...” At col. 6, lines 40 – 45 French states in part “Generally, the data structures identifying the persistent connections are stored in RAM in the client machine (emphasis added)” and at col. 13, lines 56 – 58 French states “As previously mentioned, the inventive persistent connections mechanism is implemented in software residing on the client machine.” Clearly, French teaches storing state at the client (so the client can replay the connections), whereas Applicant’s invention records state at the server.

Furthermore, at col. 5, lines 27 and 28, French states in reference to figure 4 that “The routine begins at step 62 with the user interactively entering the required information in the NET USE CLI.” Some portion of this entry by the client requires that the user make an election for a connection to be established that is a permanent one or not a permanent one. Conversely, Applicants’ invention does not ask the user to make this determination. All connections established using Applicants’ invention are deemed to be persistent and require no election or input from the user as to such. French neither teaches nor discloses a persistent connection between a client device and a server device that is not requested by a user, thus French does not teach the invention.

For at least these reasons it is believed that claim 1 is allowable over French. Claims 2 - 21 depend either directly or indirectly from claim 1 and are also believed to be allowable over French. Action for allowance by the Examiner is respectfully requested.

Claim 4

In regard to claim 4, the Examiner states that “French teaches the step of recording state occurs at points based or [sic] the progress of processing a CIFS request (CIFS, col. 3 lines 25 – 50). Applicants have read the Examiner-cited text and do not believe that the text supports the recording of state based on the progress of a CIFS request. Applicants believe that the Examiner-cited text refers to types of network devices and how a user normally attaches or mounts a given network device after they logon.

For at least these reasons it is believed that claim 4 is allowable over French. Also, claim 4 depends directly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claim 4 is allowable over French.

Claim 8

In regard to claim 8, Applicant believes this rejection was argued successfully incident to claim 1, however, applicant offers this additional and consistent

argument for claim 8. The Examiner states that “French teaches the step of recording state further comprises the step of determining whether the server shutdown was elective or non-elective (an interrupt...test outcome is negative or positive, col. 6 lines 10 – 20).

Claim 8 is repeated here for the convenience of the Examiner.

8. (original) The method of claim 1, wherein said step of recording state further comprises the step of determining whether said server shutdown was elective or non-elective.

It is without question that the persistent connection software resides on the client device (French col. 13, lines 56 – 58). The text the Examiner refers to explains how the client is able to reestablish a connection and gives examples of some causes of connection interruption. In French, the primary control for the persistent connection is with the software-enabled client device. The Applicants believe that French is stating that connections fail for some of the reasons they list, and when the connection fails the client device jumps into action to reestablish a connection for the user. Applicants find no recordation of this at the server. The client device in French, as is evident in the text and Figure 5, knows only that the connection is interrupted (not whether it was an elective or non-elective process), and the client simply replays the connections to reestablish a session. Applicants can find no mention of recording state further comprising the step of determining whether the server shutdown was elective or non-elective, thus French does not teach the invention.

For at least these reasons it is believed that claim 8 is allowable over French. Also, claim 8 depends directly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claim 8 is allowable over French.

Claim 12

Claim 12 has been cancelled without prejudice or disclaimer.

Claim 16

At page 4, paragraph 11 the Examiner asks Applicants to see his rejection for claim 12 in reference to claim 16. Applicants believe they have similarly argued this point in reference to claim 1 as claim 1 now includes the essential elements of claim 12 and claim 12 has been cancelled. Applicants respectfully ask that the Examiner consider the arguments directed at claim 1 as they apply to claim 16.

For at least these reasons it is believed that claim 16 is allowable over French. Also, claim 16 depends directly from claim 1 and for at least the reasons stated regarding claim 1 it is believed that claim 16 is allowable over French.

Claim 21

At page 4, paragraph 12 the Examiner rejects claim 21. Claim 21 is repeated for the convenience of the Examiner.

21. (original) The method of claim 1, wherein said step of attempting to continue the CIFS session that the request was part of further comprises the step of processing the remaining portion of the uncompleted request.

The Examiner does not cite any specific portions of text; however, the Examiner states that it would be obvious that the system continues to run to complete the remaining portion of an uncompleted request. Applicants can find nothing in French that would support this. French places the control of the persistent connection with the client device and not with the server device. It is Applicants' understanding of French that following the replay of the connections by the client device, the user is reconnected to the server. Applicants can find no mention that French records at the server what point a request is at such that this status information would be available to a server or takeover server so that the uncompleted portion of a request could be completed, thus French does not teach the invention.

For at least these reasons it is believed that claim 21 is allowable over French. Claim 21 depends directly from claim 1, and for the reasons cited incident to claim 1 is believed to also be allowable over French. Action for allowance by the Examiner is respectfully requested.

Claim 52

With this response claim 52 has been incorporated into claim 1 and claim 52 has been cancelled without prejudice or disclaimer.

Claims 22 – 25, 29, 33, 37, and 42

Claim 22 is essentially claim 1 in apparatus form and has also been amended to include the limitations argued above. For at least these reasons and the reasons cited above, claim 22 is believed to be allowable over French. Claims 23 – 42 depend either directly or indirectly from claim 22; for these reasons and the reasons cited above claims 23 – 42 are believed to be allowable over French. Action for allowance by the Examiner is respectfully requested.

Claim 53

With this response claim 53 has been incorporated into claim 22 and claim 53 has been cancelled without prejudice or disclaimer.

The § 103 Rejections

At page 6, paragraph 21 of the Office Action, the Examiner rejects claims 5, 9 – 11, 13 – 15, 17 – 20, 26 – 28, 30 – 32, 34 – 36, and 38 – 41 under 35 U.S.C. 103(a), as being unpatentable over French, US patent no. 6,341,312 in view of Delaney, US patent no. 5,996, 086. Applicants hereby traverses the rejection.

Claims 5, 9 – 11, 13 – 15, 17 – 20, 26 – 28, 30 – 32, 34 – 36, and 38 – 41

Applicants believe that they have successfully argued these claims with respect to French such that any combination of Examiner-cited art that includes French is moot. For at least this reason and the reasons cited above in reference to French, these group of claims are allowable over French in view of Delaney. Action by the Examiner for allowance is respectfully requested.

Claims 48, 49, and 51

At page 10, paragraph 44 of the Office Action, the Examiner rejects claims 48, 49, and 51 under 35 U.S.C. 103(a), as being unpatentable over Delaney, US patent no. 9,996,086 in view of French, US patent no. 6,341,312. Applicants hereby traverse the rejection.

The flag present in French appears to register only a positive or negative condition. Applicants cannot find that the Examiner cited art teaches or discloses a flag value that indicates that “reboot” or “takeover” of a first device was either “elective” or “non-elective” as is claimed in claims 48 – 51, thus the cited art does not teach the invention.

Delaney appears to be strictly concerned with failover of one server to another or normal shut down, and does not include a persistent connection mechanism.

French appears to be concerned with a simple persistent connection replay mechanism to reestablish a session. Claim 48 states in part "...said mode identifying an elective reboot of said first device while attempting to continue any CIFS sessions." When claim 48 is read in light of the specification, Applicants' invention claims and teaches the unique feature of an elective reboot which requires steps that include flushing active CIFS requests and placing pending requests on hold. It is impermissible hindsight to consider that a combination of Delaney and French is obvious as to an elective shutdown of the server while maintaining a persistent connection when these steps are not taught in either invention. A combination of the Examiner-cited art does not teach these steps, thus the cited art does not teach the invention.

For at least these reasons it is believed that claims 48 – 51 are allowable over Delaney in view of French. Action for allowance by the Examiner is respectfully requested.

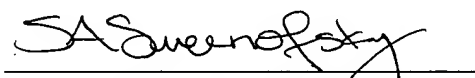
Request for Allowance

It is believed that this application is in condition for allowance. Applicants respectfully request reconsideration and allowance of this application.

If, in the opinion of the Examiner, an interview would expedite prosecution of this application, the Examiner is invited to call the undersigned attorney at the telephone number shown below.

Respectfully submitted,

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